

# Total Protection Solutions® Focus – *Power Quality and Performance*



*Modern equipment requires a virtually noise-free electrical system free of transients and surges. The answer? A Total Protection System.*

## A LITTLE HISTORY

Over the last 25 years, the complexity and sensitivity of electrical distribution systems have changed and grown substantially. Electronic equipment, such as industrial PLCs, robotics, computers, and office equipment, use sensitive and critical microprocessors (chips). In addition, industrial and commercial facilities are powering energy efficient solid state lighting, energy management systems, telecommunications, building support systems, air handling, fire alarm and security systems, HVAC systems, drives, and more. In all modern power systems, there are interactions of the electrical equipment throughout a facility. In years past, these interactions had little consequence. Motors, incandescent lighting, relays, and resistive heating elements all used power in essentially the same way with little apparent effect on each other.

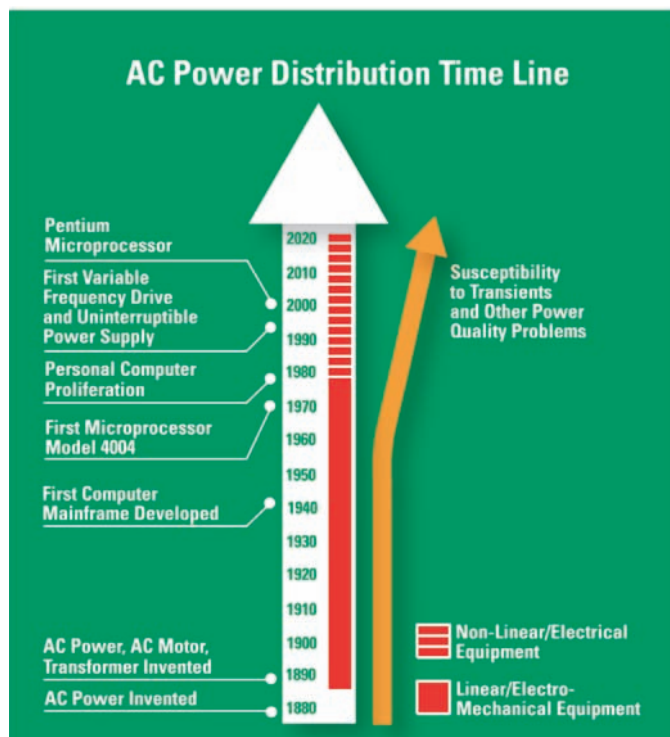
## THE PROBLEM— INCOMPATIBILITY

In today's world, computers, laser printers, copiers, variable speed drives, electronic power supplies, and sensitive silicon-based microchips are sharing the same electrical system with traditional equipment, creating a system incompatibility. Modern equipment, both now and in the future, will require the electrical system to be free of transients and surges. Neutral and ground conductors must be isolated from one another and be virtually noise-free. Simply put, sensitive modern electronics and processors cannot tolerate the high frequency transients, surges, and noise present in all electrical systems.

## THE SOLUTION— THE TOTAL PROTECTION SYSTEM

Properly networking Total Protection Solutions® surge protection devices (SPDs) solve many of the electrical problems experienced by commercial and industrial facilities. The resulting Total Protection System will dramatically improve the total operating efficiency and reliability of the electrical system. In both Total Protection System and specific equipment applications, TPS products will...

- Increase system reliability
- Extend equipment life
- Reduce equipment downtime
- Reduce electrical maintenance and equipment repair costs
- Increase productivity

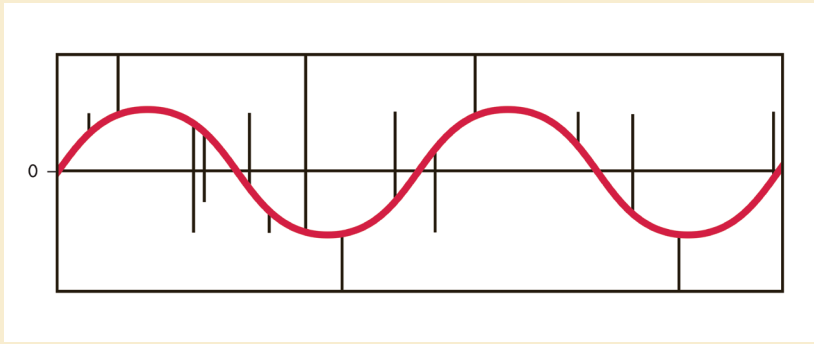


# *TPS Value Proposition*

- 
- *Extended Equipment Life*
  - *Increased Performance & Reliability*
  - *Dramatically Reduce Electrical Maintenance & Repair*
  - *Reduction in Future Capital Equipment Replacement Investment*
  - *The Foundation to Your Green & Sustainable Goals*
  - *Large Productivity Increases*
  - *Dramatically Reduce Downtime*
  - *Reduced Risk of Catastrophic Loss*

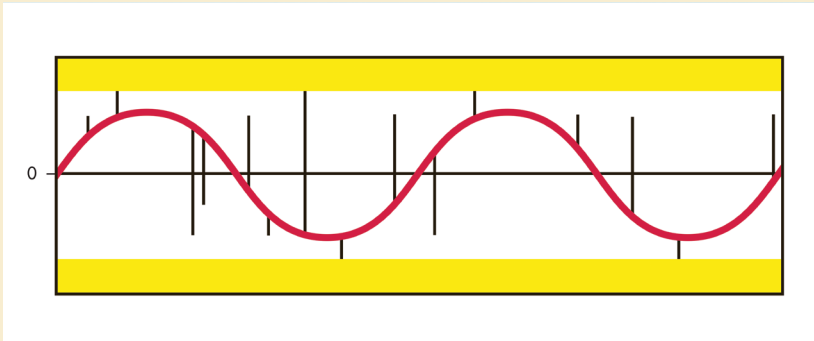
# The TPS Advantage

Computer Grade Power for your entire Facility



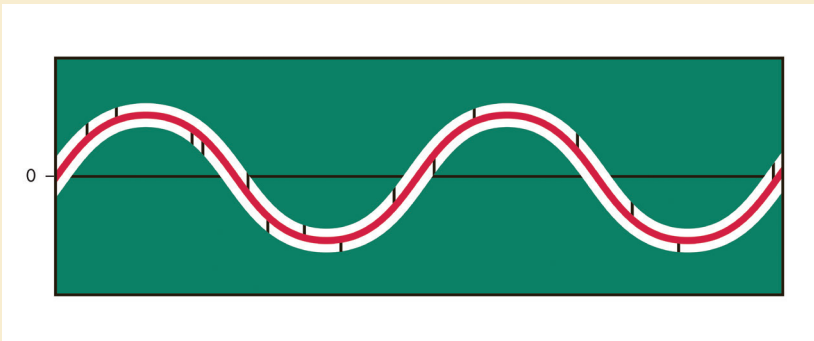
## DIRTY POWER

- Dramatically reduces equipment life
- Excessive equipment degradation over time
- High cost of ownership



## TYPICAL SURGE SUPPRESSION

- Lightning and utility surges dampened
- All sensitive electronics are still vulnerable
- Most internally generated surges and spikes are not treated



## TPS ENHANCED TRANSIENT FILTER

- Dramatically extends the life of all equipment
- Significantly increases **performance** and **reliability**
- Improve **sustainability**
- Low cost of ownership

**Hospital Data Collection**

Date: 1/31/2012

Please Enter Data In Gray Area

Project Name: Florida Hospital South

EQUIPMENT	Yearly Estimated Downtime Cost	Yearly Electrical Maintenance Repair Cost	Yearly Capital Expenditures For Electrical Equipment Replacement*	The Value of Increased Efficiency, Reliability, and Performance of All Protected Equipment	Total Capital Equipment Value
Scanning (X-Ray, MRI, Cat)	\$ 250,000.00	\$ 150,000.00	\$ 1,000,000.00	\$ 150,000.00	\$ 14,800,000.00
Patient Monitoring (Blood, Vitals, etc.)	\$ 150,000.00	\$ 150,000.00	\$ 400,000.00	\$ 150,000.00	\$ 4,000,000.00
Bio Medical	\$ 150,000.00	\$ 150,000.00	\$ 200,000.00	\$ 150,000.00	\$ 3,000,000.00
Fire Alarm	\$ 20,000.00	\$ 20,000.00	\$ 23,000.00	\$ 20,000.00	\$ 5,000,000.00
Security& HUGS system	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 500,000.00
HVAC	\$ 200,000.00	\$ 250,000.00	\$ 200,000.00	\$ 250,000.00	\$ 10,000,000.00
Lighting	\$ 100,000.00	\$ 225,000.00	\$ 100,000.00	\$ 50,000.00	\$ 2,000,000.00
Computers/Office Equipment	\$ -	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ 2,000,000.00
Misc Equipment/Electronics Not Listed Above	\$ 50,000.00	\$ 50,000.00	\$ 150,000.00	\$ 50,000.00	\$ 1,000,000.00
Lost Data/ Corrupted Files	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Summary</b>	<b>\$ 940,000.00</b>	<b>\$ 1,115,000.00</b>	<b>\$ 2,193,000.00</b>	<b>\$ 940,000.00</b>	<b>\$ 42,300,000.00</b>

Total Protection Solutions Transient Voltage Surge Suppression Investment (TVSS & Installation) **\$ 450,143.00**

**DATA REVIEW**

<b>Yearly Estimated Downtime Cost</b>	<b>\$ 940,000.00</b>
<b>Yearly Electrical Maintenance Repair Cost</b>	<b>\$ 1,115,000.00</b>
<b>Yearly Capital Expenditures For Equipment</b>	<b>\$ 2,193,000.00</b>
<b>Yearly Value of Increased Efficiency, Reliability, and Performance</b>	<b>\$ 940,000.00</b>
<b>Total Cost</b>	<b>\$ 5,188,000.00</b>
<b>Total Capital Equipment Value</b>	<b>\$ 42,300,000.00</b>

**ESTIMATED RETURN ON INVESTMENT (ROI) ANALYSIS:**

<b>Yearly Savings</b>	<b>10%</b>	<b>\$ 518,800.00</b>
<b>Yearly Savings</b>	<b>30%</b>	<b>\$ 1,556,400.00</b>
<b>Payback (ROI)</b>	<b>10%</b>	<b>0.87 Years</b>
<b>Payback (ROI)</b>	<b>30%</b>	<b>0.29 Years</b>
		<b>Years **</b>
<b>Life Cycle Savings</b>	<b>10%</b>	<b>\$ 15,113,857.00</b>
<b>Life Cycle Savings</b>	<b>30%</b>	<b>\$ 46,241,857.00</b>

\* This column reflects yearly capital expenditures to replace existing electrical equipment which was not included in the maintenance budget. Please see expanded instructions on page 2.

\*\* This 30 year life cycle is justified based on the 30 year free replacement warranty on the Total Protection Solutions TVSS equipment. This savings does not include the inflation relative to labor and equipment over time, and therefore this savings is very conservative.

Where equipment failure and reliability can mean life and death, we cannot assign a specific monetary value but without question this should have an impact on decision making.

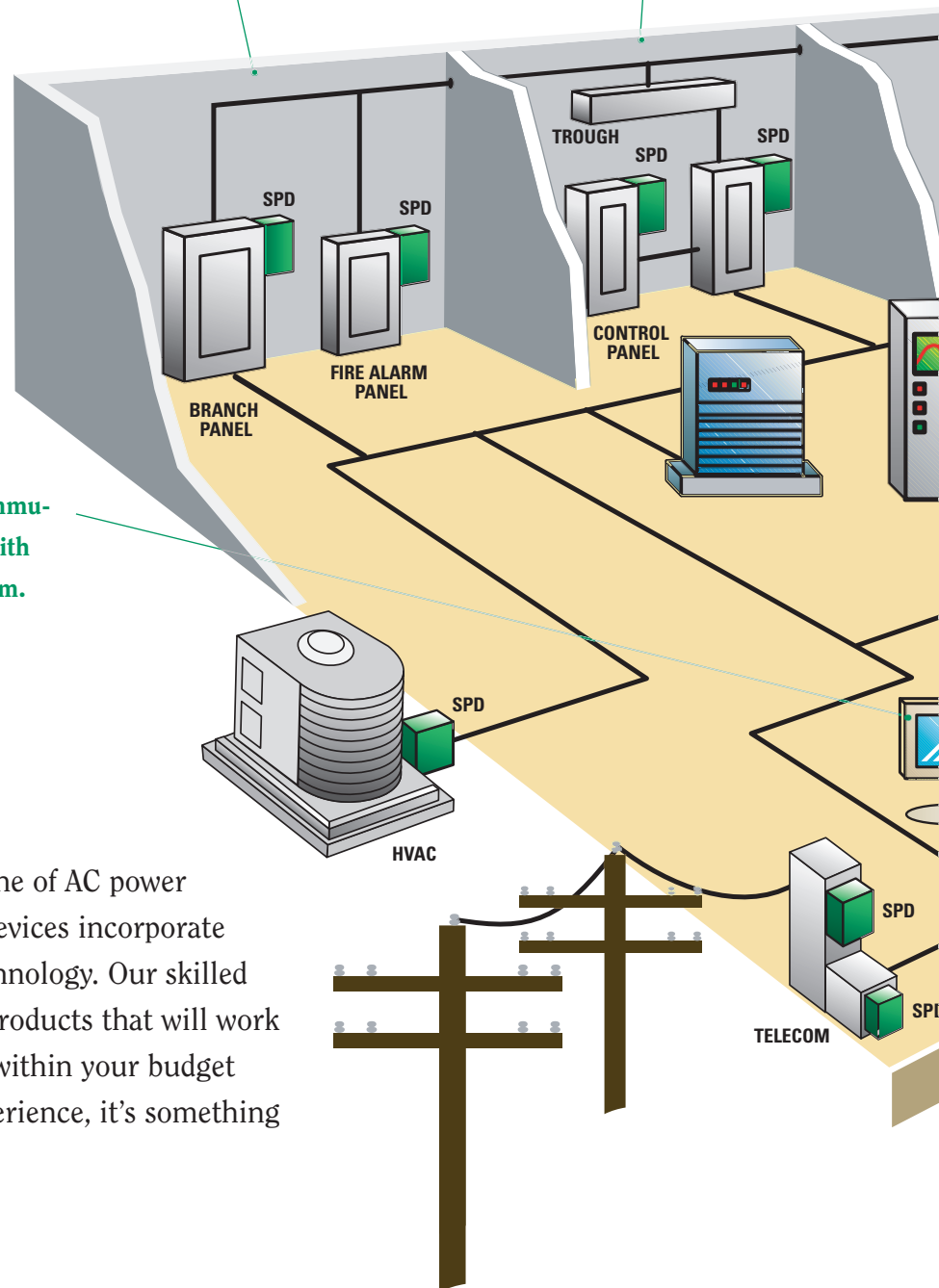
# Total Protection System – Total power protection is what we do best.

A Total Protection System® is the best way to protect your facility. Unless you protect your entire facility, transients and surges can still result in significant increases in maintenance costs and downtime.

Front office telecom, data entry and exit points are critical, as are points-of-use equipment like computers and printers.

On the manufacturing or assembly line, protect all equipment, computer controls, and lighting controls.

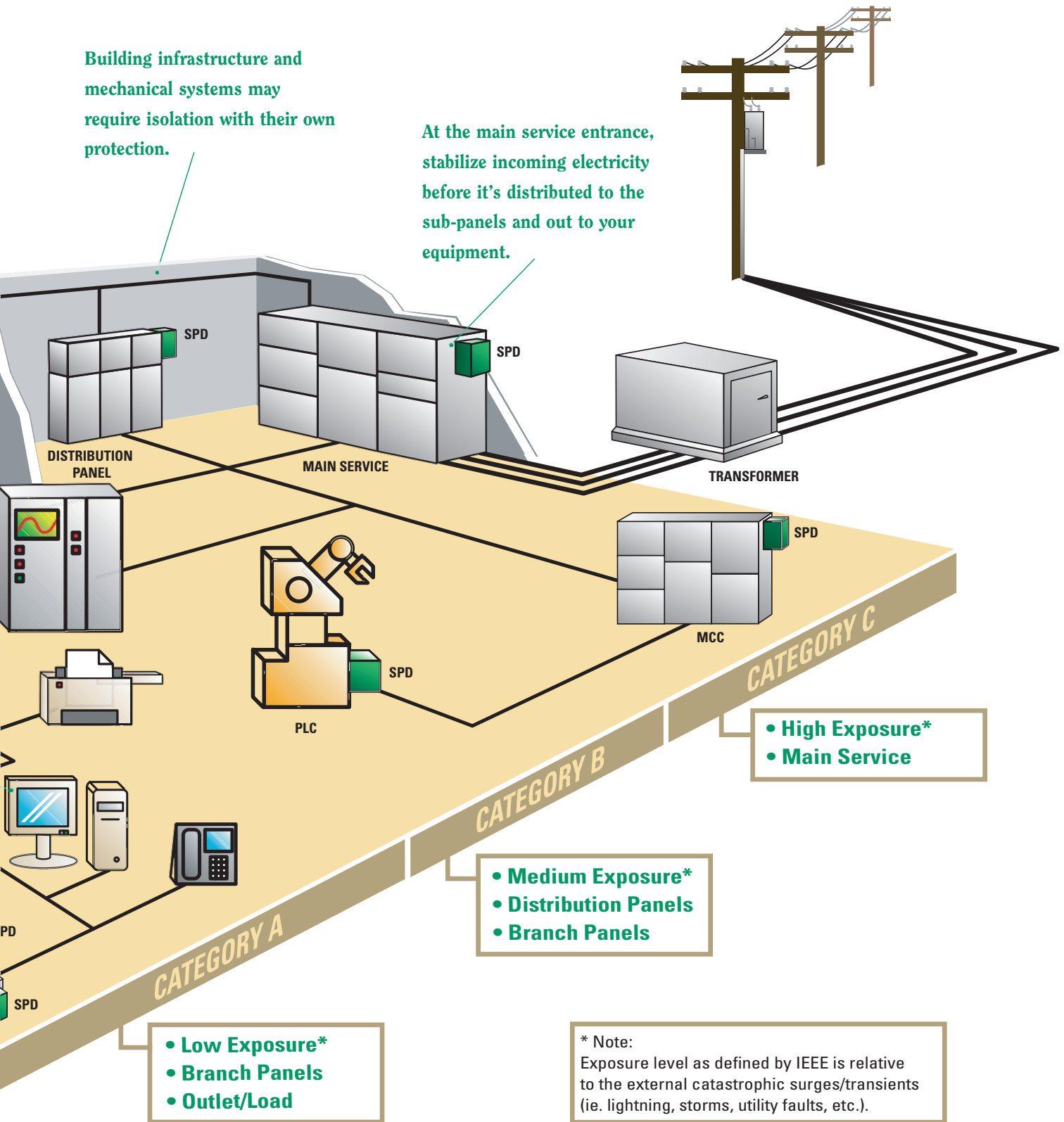
Remember to protect your telecommunication and data systems along with your AC Power Distribution System.



The Total Protection Solutions® complete line of AC power and telecommunications surge protection devices incorporate the next generation of power protection technology. Our skilled team of professionals will help you choose products that will work most effectively with your applications and within your budget requirements. With more than 60 years experience, it's something we do well for you.

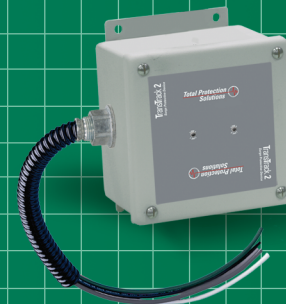
# Go Green with TPS – \$\$\$

“Increase Sustainability & Extend Equipment Life”





# Total Protection Solutions® –



## ServiceTrack® ST

ANSI/IEEE C62.41 Categories A, B & C  
(Ideal for Main Service, Distribution Panel and Branch Panel Applications)

ServiceTrack ST products are the choice for main service, distribution panel, and branch panel applications. Compact design offers easy installation. The optional all mode enhanced transient filter will extend your equipment life and reliability.

### APPLICATIONS:

- Main Service(s)
- Switchgear (MCC)
- Distribution Panels
- Branch Panels
- Critical Load Centers

### FEATURES:

- 80kA to 400kA per Phase Maximum Surge Current Rating
- Compact Footprint Allows Easy and Flexible Installation
- Component Level Fusing (CLF)
- Disconnect Switch (Fused or Non-Fused) Options
- NEMA 4 Steel Enclosure
- UL 1449 3rd Edition Listed, Type 1 device and UL 1283; UL 96a approved for structural lightning protection system installations
- Peak Surge Current – Tested and Verified at Third Party Independent Lab
- Enhanced Transient Filter (ETF): – optional
- Optional Surge Counter
- Audible Alarm Standard
- 30-Year Free Replacement Warranty

## LowProfile

ANSI/IEEE C62.41 Categories A, B & C  
(Ideal for Sub-Panel and Critical Load Applications)

LowProfile products maximize correct installation and offer performance advantages with in-wall flush mount capability. The best choice for sub-panel and critical load applications with the best enhanced all mode transient filter (ETF) in the industry.

### APPLICATIONS:

- Flush Mount Panels
- Branch Panels
- Critical Load Centers

### FEATURES:

- 80 and 120kA per Phase Maximum Surge Current Rating (for 120/240V 1 $\phi$ , 120/208V 3 $\phi$ , 277/480V 3 $\phi$ )
- Component Level Fusing (CLF)
- Fail Safe Design
- Width of 4" Allows Units to Fit Between Adjacent Panel Boards
- Depth of 4" Allows for Flush Panel Mount Installation
- Flush Mount Cover Plate: – optional
- UL 1449 3rd Edition Listed, Type 1 device and UL 1283 by an approved NRTL
- Peak Surge Current – Tested and Verified at Third Party Independent Lab
- Enhanced Transient Filter (ETF): – optional
- Audible Alarm Standard
- 30-Year Free Replacement Warranty

## TransTrack®2

ANSI/IEEE C62.41 Categories A, B & C  
(Ideal for Distribution Panels, Branch and Critical Load Applications)

TransTrack2 products protect facilities and equipment against harmful effects of lightning strikes and internally generated electrical transients. Individually fused MOVs provide superior protection and continuous operation. Low profile, ultra compact footprint and optional flush plate offer design in-wall flush mount capability.

### APPLICATIONS:

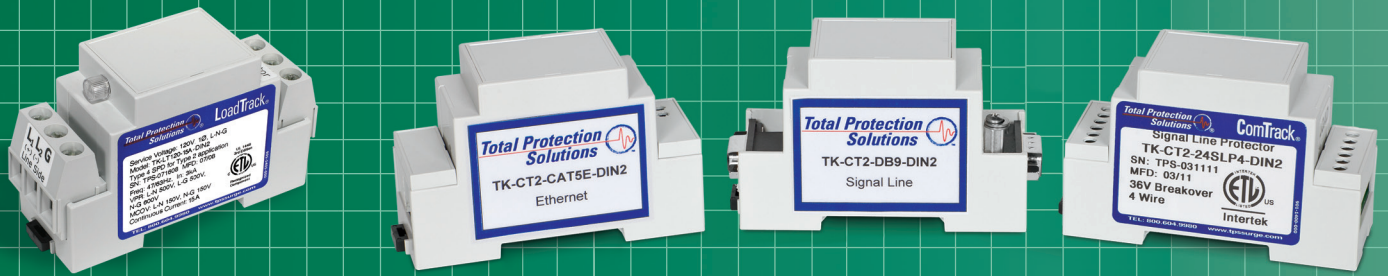
- Flush Mount Panels
- Branch Panels
- Critical Load Centers

### FEATURES:

- 65 and 100kA per Phase Maximum Surge Current Rating (for 240V 1 $\phi$ , 120/240V 2 $\phi$ , 120/208V 3 $\phi$ , 220/380V 3 $\phi$ , and 277/480V 3 $\phi$ )
- Component Level Fusing (CLF)
- NEMA 4 Steel Enclosure
- Individually fused MOVs
- Enhanced Transient Filter (ETF)
- Pre-wire pigtail conductors
- Compact Design
- UL1449 3rd Edition Listed, Type 1 device and UL 1283 by an approved NRTL
- 25-Year Free Replacement Warranty



# Our products lead the industry



## LoadTrack®

ANSI/IEEE C62.41 Category A  
(Ideal for Critical Dedicated Load Applications)

LoadTrack products are the choice for critical dedicated control load applications, such as PLCs, fire alarms, VFDs, CNC controls, etc.

### FEATURES:

- 20 to 65kA per Phase  
Maximum Surge Current Rating
- All Modes of Protection
- Series or Parallel Connection
- 15 to 40A of Continuous Current Rating
- Four Voltages to Choose From: 24V, 48V, 120V, & 250V 1Ø
- Enhanced Transient Filter
- Optional Dry Relay Contacts (LTE + LT Series)
- UL 1449 3rd Edition Listed and 1283 Recognized by an Approved NRTL
- 15-Year Free Replacement Warranty

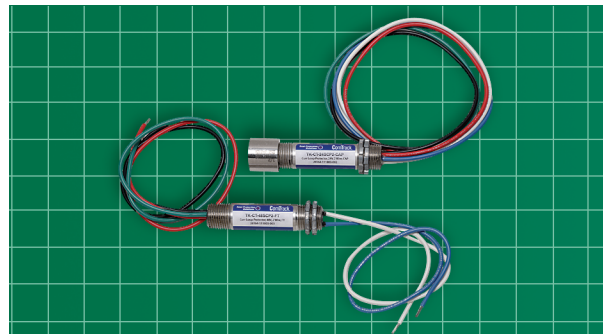
## ComTrack®

ComTrack products are the most reliable surge protective devices for data and communication applications.

### APPLICATIONS AND STANDARDS:

*Provides quality protection for...*

- Telephone Lines – (C62.36 Test Methods; C62.43 Applications; C62.64 Specifications)  
Protects All Major Applications, Including Dial-up, DSL, T1/E1, DDS, Leased Lines, & ISDN and Protects up to 25 Pairs
- Data/Signal Lines - Utilizes Multi-Stage Hybrid Suppression Technologies to Provide the Highest Surge Rating (10kA per Wire) and Data Rate (10Mbps)
- CAT. 5E and 6E
- Coaxial Lines – Wide Range of Available Configurations; Choose from F & BNC
- Multiple Termination (Terminal Block, RJ Connectors, Punchdown Block) and Mounting Methods (Bracket Style, Din-Rail, Metal Conduit) to Choose From
- UL 497A Listed
- 10-Year Free Replacement Warranty





# Total Protection Solutions Industry Leading Warranty *Quality and Performance First.*

Total Protection Solutions® products were developed with one mandate—quality and performance first. Our quality products maximize protection of your valuable equipment and operations. We support our quality and performance commitment to you by supplying the best warranty in the industry.

## QUALITY AND PERFORMANCE

Our products meet or exceed industry guidelines for product safety and performance. TPS products are manufactured in the United States and tested by an independent, NVLAP-accredited laboratory.

TPS products are designed in compliance with these industry standards:

- UL 1449 3rd Edition
- UL 1283
- UL 497A and 497B
- Telcordia (Bellcore) TR-NWT-1011
- NEMA LS-1
- ROHS Compliant

## *TPS Standard Product Warranties Are Unmatched:*

### 30-Year Standard Free Replacement Warranty

The Total Protection Solutions® Promise –  
*A Warranty Unmatched in the Industry*

We will repair or replace any surge protector device that fails due to a defect in materials, workmanship, or any electrical transient, including lightning.

**TOTAL PROTECTION FOR LIFE®**



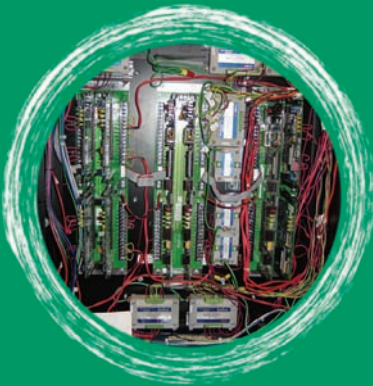
# “Do I Need Protection?”

## *Call us for a free analysis.*



Some daily frustrations of doing business can be symptoms of a dirty power supply. Ask yourself the following questions:

- Do you have computers or controllers losing memory during operations?
- Do your telephone systems disconnect calls for no apparent reason?
- Do your circuit breakers trip for no apparent reason?
- Are you replacing failed or damaged circuit boards?
- Would you like more reliable lightning protection?
- Are you replacing too many bulbs and ballasts?
- Would you like to extend the life of your electrical equipment?
- Are you interested in better reliability?
- Does your company focus on improved productivity?
- Are you concerned about equipment downtime?
- Would you like to reduce your maintenance expenses?



If your answer is “yes” to one or more of these questions, we invite you to have your facility analyzed by our experienced team of experts. Even if you already have surge suppression products in place, our skilled team can give your system a check-up and identify any areas needing improvement. Call a Total Protection Solutions® representative today, and let us show you how our surge protection programs can mean total protection for your operation. For power quality and performance, backed by an unprecedented warranty and invaluable field experience, you’ll choose Total Protection Solutions®.

*We invite you to have your facility analyzed by our experienced team of experts.*

**Total Protection Solutions** 